

chapter

5

Avian-Centric Design

Shureen Faris A. Shukor

Modern society has placed great faith in scientific research. Around the world thousands of scientists, inventors, and also designers are working to try to achieve a clear understanding of the conditions we live in and the universe that surrounds us. Nature has been a source of inspiration to many people. One of the best inspirations is the bird. Try browsing the internet under 'bird inspired design' and thousands of images will be scrolled out which display fashions, aircraft, furniture, shoes, jewelry, movies, fabrics, ballet dances, electronic games and many more.

When we talk about birds in relation to design, the word 'biomimicry' comes to mind. The term 'biomimicry' was coined in 1982 which has been explained as "new science that studies nature's models and then imitates or takes inspiration from these designs and processes to solve human problems". Nevertheless, birds have been studied for so many decades and had given us one of the greatest invention on earth in which has made travelling across the globe possible in such a short time. One of the early examples of biomimicry was the study of birds to enable human flight. Aircraft wing design and flight techniques were inspired by birds. Leonardo da Vinci (1452-1519) wrote in his manuscript expressing his thoughts on the creation of the flying machine in which he lovingly called 'The Great Bird': "I always felt it was my destiny to build a machine that would allow man to escape the bonds of Earth. I decided my machine would reproduce all the movements of a bird". In 1903, it was the Wright Brothers, who succeeded in flying the first heavier-than-air aircraft, derived inspiration from observations of pigeons in flight.

In the built environment, bird-inspired buildings termed as Aerodynamic Avian Architecture are being introduced all over the world such as the Milwaukee Art Museum designed by Santiago Calatrava where its louvers opening and closing like the wings of an oversized bird. Another well-known architecture inspired by the birds is the design of the Beijing National Stadium, also known as the 'Bird's Nest' for the 2008 Summer Olympics by Herzog and de Meuron. Birds have inspired many composers and songwriters as well. From the pop music such as the hit 'I'm Like a Bird' by Nelly Furtado in 2001, Kenny G's beautiful music of 'Songbird' in 1987, Prince's 'When Doves Cry' (1984) to Bob Marley's

'Three Little Birds' in 1977, and the list are endless. As for the classical music, one of the best musical works depicting birdsong includes Vaughan Williams' 'The Lark Ascending' (1914), Respighi's 'The Birds' and Rautavaara's 'Cantus Arcticus' (1972).

Currently, one of the famous birds in the world would be the logo of 'twitter', an online social networking service that enables users to send and read short messages called "tweets". With nearly 500 million users worldwide, the logo which resembles a Mountain Bluebird is becoming one of the icons of the 21st century.

Most people enjoy birds for their beauty, their liveliness or their songs but birds are also very useful indicators of species richness and endemism patterns. Changes in bird populations can also provide a valuable indication of broad environmental change and several species can act as indicators of environmental health. Changes in living birds, both individuals and populations, are being reported as evidence of climate change. In relation to these occurrences, the first artefact "Nature Index" is seen as a significant step in using characteristics of the outdoor which could attract birds to indicate the existence of a natural setting. The eight characters can be seen as an indicator for an area rich with natural elements and thus this research has tremendous potential to be further developed especially in promoting property development to potential buyers.

The second artefact "Formation Feathers" highlights the design of artificial baits with material sourced from duck or chicken feathers. The forming of the bait is an art by itself and this can be considered as knowledge worth sharing especially among the young urban populations.

The artefact "Light of Images" is using the image of birds to portray the technology of holography in a three dimensional medium. The approach of using technology through the use of lights and sounds to display the work suggests an interactive tool for the public to respond and interact directly with the artefact.

There are endless possibilities of how birds influence our lives. With the alarming declining quality of the environment, we hope that the presence of birds will continue to give inspiration to many more innovative designs and enrich our lives in years to come.